Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
International Comparison and Consumer Survey Requirements in the Broadband Data Improvement Act	)	GN Docket No. 09-47
	)	
A National Broadband Plan for our Future	)	GN Docket No. 09-51
	)	
Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, as Amended by the Broadband Data Improvement Act	)	GN Docket No. 09-137

SKYPE COMMUNICATIONS COMPANY
COMMENTS IN RESPONSE TO
NBP PUBLIC NOTICE #25

I. INTRODUCTION

Skype Communications, S.A.R.L. ("Skype")[1] files these comments in response to the Public Notice ("Notice") issued on December 1, 2009, by the Federal Communications

[1] Founded in 2003, Skype is revolutionizing the way people communicate around the world. Skype has more than 521 million registered users globally who use Skype software to communicate for free through voice and video calls as well as instant messages. Skype generates revenue through its premium offerings, such as calls made to and from landlines and mobiles, voicemail, call forwarding, and short message service (SMS). Skype is used in almost every country on Earth. Conversations over Skype can take place on computers, mobile devices and Skype Certified™ hardware. Consumers have downloaded Skype onto 6 million iPhones or iPod touches.

Commission ("FCC" or "Commission") in the above-captioned dockets.[2] Pursuant to the American Recovery and Reinvestment Act of 2009 ("Recovery Act"),[3] and as part of the Commission's development of the National Broadband Plan ("Plan"),[4] the Notice seeks input on the Commission's issuance of a forthcoming Notice of Inquiry ("NOI") on the "appropriate policy framework to facilitate and respond to the market-led transition in technology and services, from the circuit switched PSTN system to an IP-based communications world." Next-generation IP networks are fostering innovation and competition, driving broadband adoption, and improving consumers' communications experiences. The deployment and adoption of broadband and IP-enabled applications are and will continue to have a significant impact on our nation's economic recovery, its global competitiveness and the ability of consumers to communicate, interact, and gather and share information across the globe. Skype supports the Commission's goal of facilitating a transition from the PSTN network to an IP-based broadband network. Although many of the regulatory issues associated with the migration to IP broadband networks are addressed in a number of on-going Commission proceedings and therefore do not need additional comment cycles, Skype supports the Commission's efforts to take a fresh look at the important issues in a consolidated manner and further supports the Commission's issuance of an NOI to consider issues related to the transition.

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[2] FCC Public Notice, *Comment Sought on Transition From Circuit-Switched Network to All-IP Network, NBP Public Notice # 25, Pleading Cycle Established*, GN Docket Nos. 09-47, 09-51, 09-137, DA 09-2186 (rel. Dec. 1, 2009) ("Notice").

[3] *See* American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, 123 Stat. 115 (2009) ("Recovery Act").

[4] Recovery Act § 6001(k).

As a software provider delivering IP-enabled edge applications, Skype is acutely aware of the technology advantages of a robust IP network. While the transition to a next-generation communications infrastructure will eventually occur with little to no action from the FCC, the Commission can facilitate and improve the pace of the transition through the adoption of forward looking policies. These policies include, among other issues: ensuring that multi-modal competition flourishes by safeguarding consumer access to applications, content, and services delivered over the open Internet, regardless of the access medium used; reforming intercarrier compensation and universal service; ensuring that the emergency services infrastructure is capable of receiving and responding to data transmitted over IP networks; adopting network capability requirements and benchmarks to measure the transition; and confirming exclusive federal jurisdiction over IP-enabled services.

II. THE NOI SHOULD REQUEST INFORMATION ON A VARIETY OF TOPICS RELATED TO IP NETWORK MIGRATION

A. Fundamental Considerations

The ultimate goal for the FCC should be to adopt a policy framework that enables network operators nationwide to transition their users off of the PSTN to an all IP-based broadband network. Simultaneously, the regulatory construct should encourage investment and competition at the application layer to ensure that consumers have access to unique software and web applications that meet their communications needs. Some of this transition is occurring now as demand increases for advance applications that require the use broadband connections.

The Commission successfully orchestrated the DTV transition in June 2009, which moved millions of households away from legacy analog broadcasts to next-generation digital networks. A transition from the PSTN to an IP-based broadband network, while conceptually similar to the DTV transition, is functionally quite different. In order to successfully migrate millions of households from the PSTN to an IP-based broadband infrastructure, network operators may be required to raise additional capital to cover network investment and deployment costs. It is unrealistic to expect that the transition will occur on a particular date-certain like the DTV transition without key financial and regulatory structures in place first. Instead, as discussed below, the Commission can adopt regulatory reforms and utilize benchmarks and other metrics to facilitate and measure the transition.

B. Regulatory Issues

Open Internet. The NOI should make clear that the Commission intends to retain its primary regulatory focus: consumer empowerment. A consumerist regulatory vision transcends technology platforms; the Commission must ensure that end-users are treated fairly, and ultimately receive the benefits from such a transition. As Skype has argued in other FCC proceedings, network openness is the key to creating a virtuous cycle of investment, innovation, competition, and broadband adoption. To the extent that the Commission creates a policy environment where consumers have confidence that they can use any broadband connection for any lawful purpose, consumers will more rapidly transition to IP-enabled broadband networks for all their communications needs.

Explicit Subsidies. The NOI should also explore those regulatory policies that may actually encourage consumers to make the transition such as universal service and intercarrier

compensation reform. Although as stated above, many of these questions have been posed by the FCC in various forms over the past several years, it has generally been with the goal of sustaining funding for PSTN voice services. A fresh examination of the issues will enable the Commission to consolidate its inquiry in this new docket and focus on the ultimate goal of enabling convergence, perhaps yielding creative and unexpected solutions to the newly defined objective. Importantly, the Commission should be clear from the outset that as it reexamines carrier issues, it is not for the purpose of imposing carrier obligations on application, software, and edge providers.

To support the ultimate goal of ensuring that all consumers transition off the PSTN to IP-enabled broadband networks, the Commission must complete the difficult task of ending support for PSTN-only voice services. Universal service support for broadband, together with the Commission's openness rules, will enable consumers to access multiple communications applications and services and facilitate the transition to IP networks. Although the Commission could, in the short term, adopt new a contribution methodology that is based on connections, or numbers as a proxy for connections, the Commission may need to seek legislation from Congress that would create an entirely new means of funding a universal service program; one based, perhaps, on a general tax that would be used to support the deployment of IP technology and the delivery of IP services. The Commission should also consider how other countries have designed their USF mechanisms, and determine what has worked, and what has not. With respect to USF fund distribution, the Commission must determine whether network operators must meet certain performance metrics as described below in order to receive these explicit subsidies.

Intercarrier Compensation. The Commission should undertake compensation reforms that will enable consumers to make purchasing decisions based on accurate, market-based prices. As the Commission is aware, broadband applications that capture users' imaginations or that make their lives more productive increase demand for devices and broadband applications creating a virtuous cycle of demand-driven broadband deployment.[5] To facilitate the transition, consumers must easily understand the true cost of the services that they receive. Currently, the true cost of plain old telephone service ("POTS") is buried in universal service subsidies and intercarrier compensation arrangements. Consumers cannot make economically rational purchasing decisions when the pricing signals they receive are skewed. Moving from implicit subsidies to explicit subsidies and pushing the cost of termination to end users will give the FCC, and the consumer, the transparency needed to make rational economic choices. When consumers are faced with the true cost of POTS, the value proposition of broadband becomes more apparent and many will make the choice to move to broadband to meet their communications needs. To the extent that rural carriers may be concerned that they will be left without a consumer base: the Commission should explore whether the loss of access lines will reasonably result in the addition of broadband subscriptions. Where this is not the case, explicit subsidies, rather than implicit cost transfers, should be enable carriers to provide reasonably prices broadband access services.

Emergency Services. As the Commission plans the transition to a nationwide IP-based broadband network it should adopt policies to ensure that the country is provided with next-generation emergency services. IP-enabled PSAPs, for example, can provide more robust

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[5] *See* FCC Presentation, *September Commission Meeting*, at 12-13, 19 (Sept. 29, 2009).

emergency network services. Automatic location and other technologies, which are limited in many analog-based communications networks, can be used ensure the most robust emergency services capabilities are available to everyone. In addition to the E911 capabilities available today, consumers should be able to send PSAPs text messages, images, video and other data, which will aid in emergency dispatch. It has become increasingly clear that the primary difficulties in implementing IP-enabled emergency services are not at the application provider level. Instead, problems currently exist primarily due to limited funding and slow adoption of IP-technology by the PSAPs and emergency service providers. The fundamental question in this regard is how to orchestrate the upgrade of over 6000 PSAPs nationwide. Upgrades will necessarily require time and money. The Commission must consider how to effectuate this transition. The Commission must address both short-term capital funding to upgrade the E911 network, and also the future expected operational costs to ensure the ongoing delivery of emergency services. Coordination with the United Stated Department of Transportation, which is leading the government's next generation 911 initiative, will be imperative.

C. Benchmarks and Milestones

The Commission should also consider adopting technical requirements applicable to the IP transition and seek comment on relevant standards. As applications become more sophisticated and the emerging IP network handles more data, performance standards that guarantee a certain quality of service will become critically important. It is not enough for consumers simply to have access to broadband connections; instead, such connections must meet standards relating to jitter, latency, and other technical considerations.

Applications such as telemedicine, distance learning, and other services will create a significant spike in overall Internet traffic, and require a video-level quality-of-service. The increased demand for high-definition video will require additional network resources, which must be taken into consideration as performance metrics are established.[6] Thus, any performance metrics adopted *must* support next-generation applications which will likely require a broadband platform of a higher magnitude than currently available to most U.S. consumers.

For purposes of example only, the Commission can set a performance metric goal for 100% of consumers (or some other percentage) to have broadband consisting of, for example, 20 Mbs download speed, 1 Mbs upload speed, with a latency of 30ms or less by the first benchmark date, 40 Mbs download speed, 2 Mbs upload speed, and 20ms or less by another benchmark date, etc. Meeting these performance metrics will clearly require the laying of additional fiber, moving remote terminals closer to the end user, and other facilities upgrades, all of which will necessarily create costs. Accordingly, the Commission should seek comment on both the appropriate performance standards that broadband access provider should meet, including whether there are ITU or other standards that would be relevant to the U.S. market, and the financial impact associated with different performance-based goals.

A number of parties have recently suggested broadband deployment plans, with technical metrics, designed to meet these expected increases in consumer demand. For

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[6] *See, e.g.*, Comments of Level 3 Communications LLC, Docket No. 09-51, at 6 (June 8, 2009) (""[o]ne hour of standard definition television requires 1,350 MegaBytes per hour of bandwidth to watch online; one hour of high definition TV requires nearly 3,600 MegaBytes per hour or about three times the amount SD; … the bandwidth required for HD TV is 4,000 times a standard email and 63 times the bandwidth of a music file.").

example, Covad Communications Company has suggested that the Commission establish a multi-tiered broadband deployment plan that would, in effect, move the country to an all-IP based broadband network as soon as 2015. The main components of Covad's plan are:

- Focus on the bandwidth needed to run *next-generation* applications (video-quality QOS);
- Aim for deployment of 100 Mbps to *most* US customers by 2015;
- 20 Mbps *guaranteed* bandwidth for video and other QOS sensitive applications;
- Scalable to 1 Gbps without the need to upgrade the last mile;[7]

In adopting performance metrics and in considering transition to an IP network, the Commission must embrace bold visions of the broadband future and ensure that the U.S. adopts a plan that attempts, to the greatest extent possible, to allow for a scalable next-generation broadband network with the least amount of disruption or upgrades at the last mile as possible to meet future, unknown demand for the needs of tomorrow's advanced applications.

D. Jurisdiction and Other Legislative Issues

Finally, flexibility and modernization should govern jurisdictional considerations associated with the transition to an all-IP network. The Commission should take this opportunity to confirm the interstate nature of VoIP services clearly establish federal jurisdiction over IP-enabled services. The Commission should also review its current rules to determine whether regulatory flexibility rather than increased regulation of the application layer will provide additional incentives for investment and deployment of IP-enabled applications, thus further facilitating the transition to an all IP network.

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[7] *See* Comments of Covad Communications Company, GN Docket No. 09-51, at 2, 14. (filed June 8, 2009).

III. NEXT STEPS

As the Commission adopts a national policy framework to facilitate the transition to an all IP network, Skype urges the Commission to take the first necessary steps by resolving the economic issues of intercarrier compensation and universal service. By doing so, the Commission will provide the industry with much needed clarity necessary for continued investment and deployment of IP-enabled applications and broadband networks. Once the Commission has achieved these difficult reform goals, it can proceed with the NOI and promptly re-assess the record to address issues of technical capabilities and establish benchmarks for achieving the transition. Skype looks forward to working with the Commission on these groundbreaking and important issues in the future.

Respectfully submitted,

/s/

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Dated: December 22, 2009